

IN THE CLAIMS

Claims 1-2 (Cancelled)

3. (Currently Amended) The wrapping machine stretch head as set forth in Claim 11, wherein said motor drive means comprises:

a motor;

a plurality of sprocket wheels wherein one of said plurality of sprocket wheels is operatively connected to said motor so as to be driven thereby; and

a sprocket wheel chain operatively interconnecting other ones of said plurality of sprocket wheels to said one of said sprocket wheels such that said other ones of said plurality of sprocket wheels can be driven by said one of said plurality of sprocket wheels and said sprocket wheel chain.

4. (Currently Amended) The wrapping machine stretch head as set forth in Claim 11, wherein:

said space, defined between said first and second tension rollers and through which said portion of said wrapping film passes, withdrawn from said supply roll of wrapping film and being conveyed toward the wrapped load, is disposed within a first vertical plane;

first securing means, extending only substantially within a second plane which is substantially parallel to said first plane within which said space, defined between said first and second tension rollers, is disposed, is provided for rotatably securing said second end of said first tension roller; and

second securing means, extending only substantially within a third plane which is substantially parallel to said first plane within which said space, defined between said first and second tension rollers, is disposed, and which is also substantially parallel to said second plane within which said first securing means is disposed, is provided for rotatably securing said second end of said second tension roller and for cooperating with said first securing means in defining a channel, between said first and second securing means, which is open upon opposite sides of said space defined be-

tween said first and second tension rollers such that an axially open space is defined between said second ends of said first and second tension rollers and between said first and second securing means so as to permit said wrapping film, withdrawn from said supply roll of wrap-ping film, to be inserted into said channel defined between said first and second securing means, and into said space defined between said first and second tension rollers, in an axial direction which is substantially parallel to said longitudinal axes of said first and second tension rollers, which is substantially parallel to said second and third planes, and which extends from an axial position commencing beyond said second ends of said first and second tension rollers, through said space defined between said first and second tension rollers, and toward said first ends of said first and second tension rollers rotatably mounted upon said base plate.

5. (Cancelled)

6. (Currently Amended) The wrapping machine stretch head as set forth in Claim 5 13, wherein:

said sleeve member is fabricated from a rubberized material.

7. (Currently Amended) The wrapping machine stretch head as set forth in Claim 5 13, wherein:

said sleeve member comprises a member selected from the group comprising a one-piece tubular sleeve structure, a flat sheet member formed into a tubular sleeve structure and subsequently secured in such state, and strip material formed into a tubular sleeve structure.

8. (Cancelled)

9. (Currently Amended) The wrapping machine stretch head as set forth in Claim 5 13, wherein said motor drive means

comprises:

a motor;

a plurality of sprocket wheels wherein one of said plurality of sprocket wheels is operatively connected to said motor so as to be driven thereby; and

a sprocket wheel chain operatively interconnecting other ones of said plurality of sprocket wheels to said one of said sprocket wheels such that said other ones of said plurality of sprocket wheels can be driven by said one of said plurality of sprocket wheels and said sprocket wheel chain.

10. (Currently Amended) The wrapping machine stretch head as set forth in Claim 5 13, wherein:

said space, defined between said first and second tension rollers and through which said portion of said wrapping film passes, withdrawn from said supply roll of wrapping film and being conveyed toward the wrapped load, is disposed within a first vertical plane;

first securing means, extending only substantially within a second plane which is substantially parallel to said

first plane within which said space, defined between said first and second tension rollers, is disposed, is provided for rotatably securing said second end of said first tension roller; and

second securing means, extending only substantially within a third plane which is substantially parallel to said first plane within which said space, defined between said first and second tension rollers, is disposed, and which is also substantially parallel to said second plane within which said first securing means is disposed, is provided for rotatably securing said second end of said second tension roller and for cooperating with said first securing means in defining a channel, between said first and second securing means, which is open upon opposite sides of said space defined between said first and second tension rollers such that an axially open space is defined between said second ends of said first and second tension rollers and between said first and second securing means so as to permit said wrapping film, withdrawn from said supply roll of wrapping film, to be inserted into said channel defined between said first and second securing means, and into said space defined between said first and second tension rollers, in an axial direction which is substantially parallel to said longitudinal axes of said

first and second tension rollers, which is substantially parallel to said second and third planes, and which extends from an axial position commencing beyond said second ends of said first and second tension rollers, through said space defined between said first and second tension rollers, and toward said first ends of said first and second tension rollers rotatably mounted upon said base plate.

11. (New) A wrapping machine stretch head for use in connection with the packaging of a load within wrapping film, comprising:

a substantially vertically oriented downright;

a base plate inclined with respect to a substantially horizontal plane such that a first end of said base plate is disposed at a higher elevation than a second end of said base plate;

a supply roll of wrapping film rotatably mounted upon said first end of said base plate;

a carriage assembly, upon which said base plate is fixedly mounted, vertically movable upon said substantially vertically oriented downright between raised and lowered po-

sitions so as to enable wrapping film to be wrapped around the load throughout the vertical extent of the load;

a first tension roller having first and second ends defining a longitudinal roller axis therebetween, and wherein said first end of said first tension roller is rotatably mounted upon said base plate;

a second tension roller having first and second ends defining a longitudinal roller axis therebetween, said first end of said second tension roller is rotatably mounted upon said base plate, and wherein said second tension roller is adapted to operatively cooperate with said first tension roller so as to define with said first tension roller a space therebetween through which a portion of said wrapping film, when withdrawn from said supply roll of wrapping film, can pass whereby a predetermined amount of tension is developed within said wrapping film when said wrapping film is withdrawn from said supply roll of wrapping film and routed around said first and second tension rollers so as to be conveyed in a predetermined direction toward the load to be wrapped;

motor drive means operatively connected to first and second tension rollers for rotatably driving said first and second tension rollers;



a strain gauge roller rotatably mounted upon said second end of said base plate, and disposed downstream from said second tension roller, as considered in said predetermined direction of conveyance of said wrapping film from said supply roll of wrapping film to the load, for sensing said amount of tension developed within said wrapping film and for controlling said motor drive means in accordance with said sensed amount of tension;

a first idler roller rotatably mounted upon said second end of said base plate and disposed downstream from said strain gauge roller, as considered in said predetermined direction of conveyance of said wrapping film from said supply roll of wrapping film to the load, said wrapping film being routed around an external surface portion of said strain gauge roller which faces away from said supply roll of wrapping film, and around an external surface portion of said first idler roller which faces toward said supply roll of wrapping film, such that the outfeed flow path portion of said wrapping film which extends between said strain gauge roller and said first idler roller is disposed at an angle of approximately 90° with respect to the infeed flow path portion of said wrapping film which extends between said second tension roller and said strain gauge roller; and

a second idler roller rotatably mounted upon said second end of said base plate and disposed remotely downstream from said first idler roller, as considered in said predetermined direction of conveyance of said wrapping film from said supply roll of wrapping film to the load, such that said wrapping film is routed around an external surface portion of said second idler roller which faces away from said supply roll of wrapping film, and the portion of said wrapping film which extends between said first and second idler rollers is disposed at a substantially obtuse angle with respect to said portion of said wrapping film which extends between said strain gauge roller and said first idler roller, whereby said second idler roller will be disposed at the lowest elevational level upon said carriage assembly, due to said inclination of said base plate with respect to said horizontal plane, such that when said wrapping film is conveyed from said second idler roller to the load during a load wrapping operation, said wrapping film will be able to be applied to the lowermost elevational levels of the wrapped load.

12. (New) The wrapping machine stretch head as set forth in Claim 11, wherein:

said first tension roller is disposed upstream of said second tension roller, as considered in said predetermined direction of conveyance of said wrapping film from said supply roll of wrapping film to the load, and has a smaller diametrical extent than the diametrical extent of said second tension roller; and

said plurality of sprocket wheels comprises first and second sprocket wheels operatively connected respectively to said first and second tension rollers, wherein said first sprocket wheel, operatively connected to said first tension roller, has a larger diametrical extent than said second sprocket wheel, operatively connected to said second tension roller, so as to develop said predetermined amount of tension within said wrapping film.

13. (New) A wrapping machine stretch head for use in connection with the packaging of a load within wrapping film, comprising:

a substantially vertically oriented downright;

a base plate inclined with respect to a substantially horizontal plane such that a first end of said base plate is disposed at a higher elevation than a second end of said base plate;

a supply roll of wrapping film rotatably mounted upon said first end of said base plate;

a carriage assembly, upon which said base plate is fixedly mounted, vertically movable upon said substantially vertically oriented downright between raised and lowered positions so as to enable wrapping film to be wrapped around the load throughout the vertical extent of the load;

a first tension roller having first and second ends defining a longitudinal roller axis therebetween, and wherein said first end of said first tension roller is rotatably mounted upon said base plate;

a second tension roller having first and second ends defining a longitudinal roller axis therebetween, said first end of said second tension roller is rotatably mounted upon said base plate, and wherein said second tension roller is adapted to operatively cooperate with said first tension roller so as to define with said first tension roller a space therebetween through which a portion of said wrapping film, when withdrawn from said supply roll of wrapping film, can

pass whereby a predetermined amount of tension is developed within said wrapping film when said wrapping film is withdrawn from said supply roll of wrapping film and routed around said first and second tension rollers so as to be conveyed in a predetermined direction toward the load to be wrapped;

motor drive means operatively connected to first and second tension rollers for rotatably driving said first and second tension rollers;

a strain gauge roller rotatably mounted upon said second end of said base plate, and disposed downstream from said second tension roller, as considered in said predetermined direction of conveyance of said wrapping film from said supply roll of wrapping film to the load, for sensing said amount of tension developed within said wrapping film and for controlling said motor drive means in accordance with said sensed amount of tension;

a first idler roller rotatably mounted upon said second end of said base plate and disposed downstream from said strain gauge roller, as considered in said predetermined direction of conveyance of said wrapping film from said supply roll of wrapping film to the load, said wrapping film being routed around an external surface portion of said strain

gauge roller which faces away from said supply roll of wrapping film, and around an external surface portion of said first idler roller which faces toward said supply roll of wrapping film, such that the outfeed flow path portion of said wrapping film which extends between said strain gauge roller and said first idler roller is disposed at an angle of approximately 90° with respect to the infeed flow path portion of said wrapping film which extends between said second tension roller and said strain gauge roller; and

a second idler roller rotatably mounted upon said second end of said base plate and disposed remotely downstream from said first idler roller, as considered in said predetermined direction of conveyance of said wrapping film from said supply roll of wrapping film to the load, such that said wrapping film is routed around an external surface portion of said second idler roller which faces away from said supply roll of wrapping film, and the portion of said wrapping film which extends between said first and second idler rollers is disposed at a substantially obtuse angle with respect to said portion of said wrapping film which extends between said strain gauge roller and said first idler roller, whereby said second idler roller will be disposed at the lowest elevational level upon said carriage assembly, due to

said inclination of said base plate with respect to said horizontal plane, such that when said wrapping film is conveyed from said second idler roller to the load during a load wrapping operation, said wrapping film will be able to be applied to the lowermost elevational levels of the wrapped load;

said second idler roller having a sleeve member, disposed around an external peripheral portion thereof, for effectively causing said wrapping film to adhere thereto in such a manner that while relative conveyance of said wrapping film, from said supply roll of wrapping film toward the load is permitted, transverse movement along said second idler roller in a direction parallel to the longitudinal rotational axis of said second idler roller is effectively prevented so as to prevent said wrapping film from undergoing any slippage with respect to said second idler roller.

14. (New) The wrapping machine stretch head as set forth in Claim 13, wherein:

said first tension roller is disposed upstream of said second tension roller, as considered in said predetermined direction of conveyance of said wrapping film from said

supply roll of wrapping film to the load, and has a smaller diametrical extent than the diametrical extent of said second tension roller; and

said plurality of sprocket wheels comprises first and second sprocket wheels operatively connected respectively to said first and second tension rollers, wherein said first sprocket wheel, operatively connected to said first tension roller, has a larger diametrical extent than said second sprocket wheel, operatively connected to said second tension roller, so as to develop said predetermined amount of tension within said wrapping film.